5

ABSTRACT OF THE DISCLOSURE

The invention discloses a substantially pure population of human ovarian mesothelial cells and methods of isolating and culturing the ovarian mesothelial cells. By carefully manipulating the microenvironment of the ovarian mesothelial cells, multiple passages are attainable wherein the ovarian mesothelial cells are capable of becoming ovary surface epithelial cells or granulosa cells. In addition, several methods of use of human ovarian mesothelial cells are disclosed herein.